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NOTE ON THE TIME OF RISING OR SETTING OF  
THE MOON.

BY SIDNEY D. TOWNLEY.

Professor YOUNG, in the 1898 edition of his "General Astronomy," added a method of computing the time of rising or setting of the Moon, (page 94, article 131). Since the method involves a transformation from sidereal to mean solar time I have found it less convenient than the following: Estimate as nearly as possible the Greenwich time of moonrise or moonset and take the Moon's Declination from the Ephemeris for that time. Compute the hour-angle with this value of the Declination using a zenith-distance of  $90^\circ$ . This hour-angle, corrected for the motion of the Moon in Right Ascension and for the gain of sidereal on mean solar time, subtracted from or added to the mean time of the Moon's transit (American Ephemeris, pages 408 to 415) gives the time of rising or setting. The correction to the hour-angle is easily obtained by multiplying the hour-angle by the "change per hour," found in the column adjacent to that of the mean time of transit. If the first estimate of the Moon's Declination is not very close, then the computation must be repeated.

The correction for semi-diameter, refraction and parallax is always small. Assuming the horizontal refraction to be  $35'$  then this correction in medium latitudes will range from two-tenths to one minute, depending upon the value of the parallax. For most purposes it is quite sufficient to assume five-tenths of a minute for this correction, which is to be added to the time of rising and subtracted from the time of setting.

If a series of values of risings and settings are to be computed for any particular place, then it will be convenient to construct a table for this correction. Likewise, a table for hour-angles ( $Z = 90^\circ$ ) may be computed, with the Declination of the Moon as the argument.

(THIRTY-EIGHTH) AWARD OF THE DONOHUE  
COMET-MEDAL.

The Comet-Medal of the Astronomical Society of the Pacific has been awarded to M. MICHEL GIACOBINI, of the Nice Ob-

servatory, for his discovery of an unexpected comet on January 31, 1900.

The Committee on the Comet-Medal,

W. W. CAMPBELL,  
W. M. PIERSON,  
CHAS. BURCKHALTER.

1901, January 14.

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(THIRTY-NINTH) AWARD OF THE DONOHOE  
COMET-MEDAL.

The Comet-Medal of the Astronomical Society of the Pacific has been awarded to A. BORRELLY, Adjunct Astronomer in the Observatory, Marseilles, France, for his discovery of an unexpected comet on July 23, 1900.

The Committee on the Comet-Medal,

W. W. CAMPBELL,  
W. M. PIERSON,  
CHAS. BURCKHALTER.

NOTE. — This comet was independently discovered on the same night (July 23), but about five hours later in absolute time, by W. R. BROOKS, of Geneva, New York; and the discovery was regularly and promptly announced.

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